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ABSTRACT

This document reviews the major trends of thought concerning first and second language acquisition, in an attempt to trace a sequential history to second language teaching methodology today. The contributions of the behavicrist and nativist schools of thought are examined in particular, and two major issues are focused upon: (1) the origins of second language teaching methodology and the way it is evolving; and (2) the implications for language teachers of historical and current thought concerning language motivation and crucial factors in the acquisition of language skills.
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"Overview of Major Theories and Identification of Crucial Factors in the Acquisition of First and Second Language Skills"

by

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1977

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Introduction

The process by which we acquire our language has long been an area of interest for language educators and developmental psychologists. The evidence would seem to indicate that young children acquire language at a very early age with no apparent effort or difficulty. This process has seemed to be quite mysterious and is complicated by the fact that small children, most of whom become quite proficient in complex language patterns, have not even begun to acquire the operational skills one would think necessary to control a logical and systematical matrix of speech. Yet while a great deal of research has gone into attempting to isolate key elements in language development, no study has succeeded in identifying a single factor to which we can attribute the majority of language development.

Therefore the purpose of this research paper will be to provide a review of some recent pertinent literature concerning the areas of first and second language skills acquisition, specifically including an overview of major developmental theories related to first and second language learning, identification and discussion of factors considered to be crucial in the acquisition of first and second languages, identification of major

implications for the teaching of second languages, and to offer some recommendations of general value to other teachers of second languages based on the literature presented here.

The limitations of this paper should be set out at the beginning. This is not intended to be an exhaustive review of the literature, and no original research was conducted by the author other than the literature review itself.

Overview of Major Theories

Theories concerning the acquisition of first and second language skills are nearly as numerous as the population to which they address themselves. Such a lack of agreement within the knowledgeable community should offer some indication of the complexity of the task of unraveling a human capability. There are, however, some broad major categories into which most of the more prominent theories and their variations accepted by authorities as having at least some merit may be grouped.

One of the more comprehensive reviews of major theories is provided by Butler (1974). According to his work, no complete language acquisition theory exists at the present time, but the existing frag-

ments fall into three broad categories generally labeled behavioristic, nativistic, and cognitive models.

According to the behaviorist theory, language acquisition by small children is largely through imitation. This idea is valid for behaviorists on the basis of scientific observation. Children acquire their first language without the benefit of formal instruction, and by a certain amount of parroting role models. True to form, the Skinnerian process of Stimulus-Response (hereafter referred to as S-R) is upheld in the learning model of error/correction correction/approval by parental and other speech models. Also inherent in this model of language acquisition is the idea of critical periods in development which will be discussed in greater detail later in this paper.

In recent years this theory has come under a great deal of attack, probably as much in reaction to the behaviorist model in general as in response to the validity of the theory itself. The major bases for criticism come as a result of recognizing that the task of memorizing and repeating in parrotlike form all the possible sentence structures without benefit of a reasoning process is very nearly, if not altogether, impossible. For example, a 15 word sentence has ten[45] combinatorial possibilities.

Such a rote memory task as internalizing all these combinations of structures would indeed be a difficult task in a model devoid of all human qualities and based solely on the concept of S-R. In addition, criticism has been leveled on the basis of observations of children making incorrect responses to stimulae. Research has shown that children's incorrect responses are highly resistent to adult alteration. Furthermore, the behaviorist model fails to account for incorrect responses which have not been previously modeled for internalization.

The nativistic model believes that it is more accurate and comprehensive than the behaviorists. According to the nativist, his approach includes something entirely forgotten by the behaviorist- that man is a different creature from the other animals, and is in possession of unique characteristics enabling him to exhibit a peculiar affinity for language acquisition. More directly in nativistic terms, man has not only the psychological and human capacity to produce language, but also possesses the necessary anatomical and physiological structure to do so. In addition, man seems to have an innate propensity toward language acquisition, as is evidenced by the failure to teach verbal communication to apes despite their high intelligence. Nativists

further claim that language is nearly unique to humans in that it is almost impossible to suppress some sort of language development even in severe cases of retardation.

As is typical of theories, the cognitive model is in partial agreement with both behaviorists and nativists. The cognitive model is the most recently developed and builds empirically on the research of the other two models. The cognitive proposition agrees with nativists that certain basic propensities for language are conveniently unique to man, but the cognitivist has difficulty in agreeing as to what those attributes are. The cognitivist, in addition, would prefer to view language acquisition as a fluid, lifelong process providing for intelligent capacity to take information and transform it into workable systematic patterns resulting in the emergence and domination of rules of speech. The behaviorists and nativists would not be willing to grant the individuality and freedom in speech promoted by the cognitivist.

Since the current emphasis among language educators and theorists seems to tend toward the cognitive model, a closer view of its major components as an example of the internal structure of a theory would

seem to be in order. Taylor (1974) advances for examination a framework for first and second language acquisition in children and adults alike which is based on five major points. Essential to his plan are the existence of critical periods, psychological learning strategies, native language influence, variables of cognitive maturity, and affective psychological variables. The following is a brief discussion of each of these points.

The concept of critical periods has received much acclaim and discredit in recent years. One popular definition of critical periods in language development is that a critical period is directly related to the maturational process and is governed by limitations of age, commonly thought to be 2-14. Taylor seems to agree with this definition and adds that critical periods are usually associated with structural brain cell changes such as increased cellular density and electrophysical and chemical alterations. Hemispheric domination and lateralization of the brain are also thought to be influential in language acquisition. Most of the work regarding language and lateralization has been promoted by Lenneberg (1967).

According to Lenneberg, passing out of the critical

period seems to result in a loss of adaptability and inability for reorganization of the brain. The result of the maturational processes previously mentioned is a matrix of language skills in which approximately 60 percent of language values are attained by age 2 and almost 100 percent by age 14. Lenneberg's experiments with adult aphasic patients seem to prove the fixed nature of language suggested by critical periods. Such patients did not lose previously acquired knowledge of language, but had to re-learn the expressive skills, often with less proficiency than before.

In support of Taylor and Lenneberg, work in this area by other researchers seems to indicate that there are indeed critical periods relating to language development. The work of Krashen (1973) is supportive of the existence of critical periods although the implications are considerably different than those that can be drawn from Lenneberg. Krashen cites as an exception to the inflexibility and finality of critical periods the case of a 13 year-old girl who was forcibly deprived of language development. Even though language development was stunted past puberty, she was able to gain near normal first language proficiency and is well on the way to greater than average proficiency in a second language. The significance

of this research is the disproving of the impossibility of language acquisition due to lateralization and fixation of language matrices.

While Krashen's work seems to destroy the carefully laid plans of Lenneberg, it should be remembered that the conclusions drawn by Lenneberg were cautious and tentative and therefore not as generalizable as many have assumed them to be. He makes no direct reference to second language acquisition and is forced to admit that it is difficult to assess any learned skill to a particular period in the human condition. The major implication in the work of both Krashen and Lenneberg is the facility of second or even first language acquisition. Inferred is that in the critical period children can learn a first or second language with no apparent effort, whereas later a studied effort is needed, and there may be native language hindrance.

The ability to acquire a second language by a transfer of primary skills must then be accepted as possible if the rigidity of the critical period is denied. Many studies support this concept, and Chomsky would probably agree since he believes that natural languages differ little in their deepest structures. Thus the evidence seems to indicate that a transfer of

skills process would be reasonable, limited only by age and increasing inflexibility of ability to reorganize fixed language matrices. In addition, second language acquisition would be hampered by the discrimination and differentiation that took place prior to the fixing of the matrix during the critical period. Differentiation and discrimination would likely be manifest in first language accent and syntactical carry-over.

It would therefore be questionable to many theorists, though they cannot agree on the limitations imposed by critical periods, whether or not an adult past the critical period could ever become a co-ordinate bilingual due to application of primary language patterns to secondary situations as opposed to the optimum of co-ordinate acquisition in early childhood.

Secondly, of equal importance but of less emphasis is the concept of psychological learning strategies in Taylor's scheme. Taylor takes exception to the behaviorist theory of language acquisition by rote imitation in that errors made in first language acquisition suggest that children do not solely imitate or repeat, but operate on a strategy designed to simplify and regularize the syntactic structure (e.g., regular endings on irregular past verbs indicate oversimplification of an already acquired basic skill).

In this belief Taylor illustrates clearly the position of the cognitivist that the tendency of man is to find a rule that supersedes the exception, and will cling to it resisting correction. The cognitivist thereby rejects the operant conditioning claim of behaviorists.

Further support of Taylor's learning strategy and rule dominance is offered by Dulay and Burt (1972) who argue that second language errors are similar to first language errors. These errors typically include syntax oversimplification, rule overgeneralization, and reduction of syntactical redundancies inherent in non-Anglo languages. Other researchers have reported that these tendencies are true for adult second language learners as well. Thus it would seem that Taylor's learning strategy concept is generalizable to both first language acquisition in children and to adult second language acquirers as well.

A third factor in Taylor's plans is native language influence. According to his research, first language influence cannot be denied, especially for post-pubescent learners. Special emphasis should be given in this model to the inflexible behaviorist point of view in this matter. The variable of native language influence is too complex to generalize as the behaviorist would like to do.

The complexity of the variable is illustrated by the many people who do succeed in learning a second language with no appreciable native language influence. The value of such a concept lies not in its detrimental role, as the behaviorist would see it, but in its ability to act as a point of reference, an aid for the student who can work well by comparisons in developing a base of target language structures.

The fourth factor in Taylor's model is cognitive maturity. This factor appears to play a vital role in his thinking, despite the fact that he devotes little space to its development. He uses this factor as a negation of the behaviorist's gloomy perception of adult second language acquisition. Whereas the value of the ease of acquisition in critical periods for children is evident, the advantage of qualitative cognitive capacity for adults as opposed to mere quantitative ability in children is stressed.

The fifth and last factor in Taylor's model of second language acquisitional processes is that of affective variables. Special emphasis is given here to the concept of Interlanguage. Interlanguage refers to the transitional nature, the motivation of communicative needs in first language acquisition. As a result of a need to communicate,

children need no further motivation. Since this is a basic need, first language acquisition is a fluid and permanent process, whereas second language communication needs in adult learners are often vague and ill-defined, resulting in fossilization of acquired skills. This fossilization occurs when an adult learns only as much as he minimally needs of a second language and then proceeds to stop learning entirely. It would then seem reasonable that other motivational factors would need to be identified as responsible for cases of successful adult learners.

Taylor's model is representative of the cognitive school of thought regarding language acquisition. It does not propose to be a whole theory. He identifies other factors such as a lack of a positive goal for adults, negative social attitudes of individuals and society, the melting pot syndrome, the growth of an international commerce language, and socio-economic variables- all of which play an important role in second language acquisition in both children and adults. Some of these affective variables will be discussed in the next section.

Variables Affecting First and Second Language Acquisition

One of the more complete studies involving identification of motivational and affective variables in language acquisition is provided by Kharma (1977). Although he freely admits that not all possible factors have been identified yet, he succeeds in identifying 19 variables which he considers crucial to second language acquisition. The following section identifies some of those variables and comments briefly. In the interest of space, some compounding of overlapping variables has been done by the author of this paper.

Of first consideration in Kharma's plan is the age of the learner. The behaviorists' influence in Kharma's scheme should be readily evident. In his thinking, the maturational processes play an important part in the method and ease by which one learns a second language.

The student's cultural background is a tremendously important affective variable as well. Many factors can be bound up in this concept, such as parents' education, parental attitudes toward school in general, or parental attitudes toward the target culture. It should be fairly clear that if the parent feels a need as a result of socio-economic class or any other reason to feel condescension toward the target language and its speakers,

the effect of these attitudes on the child would be immediate and probably adverse in most cases. This would seem to be an important factor in certain segments of American society.

Closely related to the nuclear cultural background of the learner is his community background. Typically persons of like origins group together and form communities. It is reasonable to suggest that this could create entire clusters of communities in which language skills were valued or dismissed entirely as irrelevant. If a community should choose to discriminate in some way, the conditions for language motivation would not be optimal.

Of some imprtance but of less weight is the international prestige of the target language. Some languages do not stand a chance of being valued in a community while others, for various reasons, are heartily supported. In the experience of the author of this paper, situations have been seen in which communities have refused to support particular languages while offering to promote others. This may or may not be linked to the previously mentioned cultural heritage of the student.

The curriculum of the school reflects, either appropriately or inappropriately, the values of the community.

It is highly unlikely then that language in a community which generally derides the use of language other than the native would occupy a position of major importance or value in the school. Given such a role, the school must then become a variable affecting language learning.

There are also many other factors which are only indirectly related to the community which purvey attitudes to language students. According to Kharma, these factors are generally perceived to be within the boundaries of the school system itself. Typically included are the student's first language experience, the caliber of the language instructor, the teacher's attitudes toward his position, the student-teacher relationship, texts, methods, objectives or reasons for teaching languages, individual differences and innate curiosity levels in students.

Most language teachers would agree that the student's first experience with the language is the most important of the above factors. It is reasonable that the other factors may be automatically controlled for by the proper or improper functioning of the first experience.

It should be obvious that the process by which a student meets and interacts with a foreign language experience is a complicated and interdependent one.

Implications for Language Teaching

Given the present low state of the art, many language educators despair of ever remedying the mass of previously poorly controlled for variables. A poor reputation is hard to defeat. There is no doubt that many language teachers have been more concerned with teaching language per se than with teaching people. Brown (1973) identifies in a somewhat cynical yet hopeful manner the trend of language teaching over the last 75 years and makes [illegible] suggestions for the future. He sees a predictable revolution in language teaching every 25 years. This revolution is indicative of a lack of continuity or agreement among educators as to the most effective method of instruction, yet at the same time offers an escape from the poor methods devised thus far. The turn of this century brought the so-called direct method. The 1920's brought the translation method, the 1950's brought the audio-lingual methods, and the current trend of the 1970's is toward an as yet undefined goal, but it appears to have something to do with inter-disciplinary studies and an increased emphasis on affective cognitive models. This would seem to be borne out by earlier discussion here.

Brown sees research as essential in several areas if this decade is to produce a new model for language skill.

Among those areas most needing expansion are ego and identity factors.

With regard to ego factors, first language acquisition is imitative, unhibited, and free of disabling self-consciousness. There is no fear of mistakes, and no pride to be injured. Brown believes research should concentrate on improving the situation for adult language learning by seeking out ways of reducing the stressful situations involved with ego.

The other area recommended by Brown for research involves identity. In learning a second language, a re-evaluation of self is required and a new identity is formed. Current thought is that this could be a key factor in unlocking the secrets of motivation in successful post-pubescent learners. This idea is supported by Ausubel (1968) who declares that a key factor in motivation is ego enhancement. In other words, the individual must see language acquisition as intrinsically and urgently valuable to him.

Guiora, Brannon and Dull (1972) have contributed significantly to the areas of ego and identity mentioned by Brown. Guiora et. al., have isolated ego factors from the variable of inhibition. Research was done in which adult language learners participated in a test of

pronunciation in a previously unseen language. Participants were divided into two groups. One group was given small amounts of alcohol prior to the test, and the other group received no stimulus whatever. Results were a breakdown of inhibitions with significantly better performance by the group receiving the stimulus. One criticism must be taken into account, however. It is possible that the responsible factor in improved performance could have been caused by induced muscle relaxation rather than inhibitive reduction.

Another area identified by Brown as needing increased research is that of social factors. While many other researchers have emphasized this area as being important, Brown has brought to light factors not identified by the others. These are empathy, introversion-extroversion, and aggression. These are undoubtedly involved in the previously mentioned ego-centrism, but they involve interpersonal relationships to a greater degree. Brown cites recent research by Guiora et. al., in which the researchers found that a modified version of the Micro-Momentary Expression (MME) test of empathy successfully predicted future authenticity of foreign language pronunciation.

Brown also brings a new light to the term <u>aggression.</u> Usually defined in a negative sense, aggression is frowned upon in most of its forms of expression. Brown suggests

that it may be possible to find methods of enhancing aggression which may in turn produce better performance in oral skills. A person who finds a need to communicate in an inhibited language can often break through those inhibitions when incited to forget self-consciousness.

Aside from Brown, the variable of the role of intelligence in language learning is one which unfortunately has not received a great deal of attention. This is indeed unfortunate since so much work has been done in the area of social class and language. It would seem logical that intelligence and social class are bound up together, at least if one were at all willing to investigate the relationship. Research conducted by Genessee (1976) investigated the factors contributing to the success and failure of language teaching to students of varying intelligence. For purposes of the study intelligence was defined as performance on a standardized test of intelligence. The instrument used was the Canadian Lorge-Thorndike. In addition, tests of reading, aural comprehension, math, and interpersonal communications skills in French were administered to students in high, average, and low intelligence groups. The students were obtained from two language programs. One program was a traditional French as a second language (FSL) program, and the other was an

Immersion program. Students of equal ability classes were matched and compared in a cross-program study.

The results were not surprising in terms of achievement. Those students possessing greater intellects scored significantly higher than those of lower intelligence regardless of which program they participated in. It must be taken into consideration that any intelligence test is to a certain extent a measure of achievement rather than a raw potential, and the Lorge-Thorndike is no exception. In fact, the administration manual states that the test's validity can be checked by its value as a grade predictor. However, no consistent correlation was found between interpersonal communication and IQ. These results were equally true in both FSL and Immersion programs. This is consistent with beliefs about first language. All students or children learn to communicate for the sake of communication. The implications are that all children regardless of intelligence can benefit from language instruction if taught for communicative purposes. Programs stressing academic skills would be better suited for higher intellects.

In addition to the role of intelligence, more attention must be given to the implications of social class in language learning. This factor is broad in scope and encompasses

many of the affective variables such as parental and community attitudes discussed in an earlier section of this paper. This factor may be more accountable for a great deal more of the lack of success in post-pubescent second language learning than is realized.

Many researchers have alluded to social class in their work, but the deserved stress is not evident. Those researchers who have realized at least to some degree the significance of social class on language learning have recognized that disadvantaged children may suffer a decided disadvantage when confronted with post-pubescent second language learning. It is very difficult to isolate cognitive factors from affective factors and as a result the chief causes of language deprivation in first and second language are not clear. The research by Bruck and Tucker (1974) indicates that low SES children suffer an academic disadvantage by the simple fact that in the teacher's perception they are deficient, whether that is the case or not. As a consequence, those programs designed for disadvantaged youth either in first or second languages often attack what are assumed to be deficiencies in language but are simply cultural parallels in speech patterns. In other words, children are often assumed deficient for exhibiting

equally complicated speech patterns but within a dialectal variation. Parker (1975) even goes so far as to state that there is no such thing as incorrect speech- only variations upon other variations.

While remedial or disadvantaged programs may often be worthwhile, they assume that their subjects are not proficient and teach skills that are already acquired and thus irrelevant. Bruck and Tucker researched problem areas which exist for low SES children and found that real deficiencies do exist in remembering the task, in paying attention for extended periods of time, in dialectal differences, in less explicitness in description indicating vocabulary deprivation, in difference in evaluating communicated commands. Much research indicates that low SES children oftentimes know the information but lack the expressive skills to verbalize it. This is especially true in thought continuity as evidenced by research conducted by the Laboratory of Human Cognition (1976). Experiments conducted show that low SES children have difficulties with abstractions, particularly in the area of functors. Functors are defined as conjunctions, prepositions, and negatives. Little difference was found other than relative degree of sophistication in nouns and verbs The implication of these and other research findings

is in the application to communicative emphasis in first and second language programs, and to not stigmatize children by assumption of deprivation on the basis of origin.

It should be obvious that the task of identifying crucial elements in language acquisition is a monumental one. In suggesting areas for further research, the surface of unraveling the complicated acquisitional process has only been scratched. The implications for foreign language teaching are far-reaching and consequential. It should be evident from the lack of agreement among experts that much still remains to be done.

Recommendations

The heading of this section is perhaps insufficient to what follows here. Encompassed in the term are the author's reactions in regard to what should now be done on the basis of the information presented. Throughout the paper the author has attempted to read thoughts and reactions into the information presented, and to draw conclusions based on the research. These conclusio have often been inserted into the text of the paper.

Teachers in general express little love for theory. Reactions range from disgusted exclamations to pleas for practical methodology. All of the reactions express

a basic misunderstanding of the purpose of theory. All practice flows from theory rather than all theory from practice. Every teacher, regardless of whether or not he is into theory or not, is actively involved in the practice of theory each time he presumes to face a class. Each time a teacher acquires a new bit of pedagogical paraphernalia he is infringing upon the world of theory. No teacher of languages could express a belief in cognitive or behaviorist models of learning without in some way, however simplistic, involving himself with theory. As a consequence, a strong recommendation must be made that every teacher have a strong understanding of why they teach the way they do, for each practices a theory no matter how unconsciously.

The behaviorist model, despite its relative obsolescence in pure practice, holds many consequences for the way language is taught. Certainly every language teacher should realize the importance of critical periods which are the major behaviorist contribution to language methodology.

The nativistic model provides us with something woefully lacking in behaviorism. The knowledge that man has unique capabilities in language not possessed by the lower animals is indeed precious knowledge.

The cognitive model provides us at last with the realization that man is a rational thinking animal capable of far more than mere parroting or mechanical responses to contrived stimulae.

In addition to a philosophy of man, we have gained the recognition of affective variables in language learning. In fact, this area may prove to be the most valuable in terms of shaping the theory of the future. The sooner schools and language teachers begin teaching language as a serious tool rather than as a frill in the curriculum, the sooner the state of the art will improve. The best way to attack the lackadaisical attitudes of administrators, parents and students is to provide affective fulfillment in the areas previously mentioned.

Further research must be done in relation to intelligence and language. This could be crucial in terms of elitism of curricular areas. The obvious implication would be to define optimum learning styles for intellectual variations and adapt teaching methods accordingly.

Language must be seen as valuable to all persons. Davies (1976) suggests that value be stressed on language skills other than fluency. He recommends that language study be a must for students of all intellectual ability.

Students should be required to study one language at what he calls Level 3, which is oral-productive, two languages at Level 2, which is receptive or listening capability, and at least one language on Level 1, which is reading ability.

Whether or not we follow Davies' suggestions or not is immaterial. What is important is that we succeed in isolating and defining component parts of a whole theory of language learning in order to develop a comprehensive theory from the parts. When this has been accomplished, we can begin to develop an optimum method for students who have passed the critical period of development and are at our mercy.

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